

Lockheed Martin Corporation
Corporate Environment, Safety & Health
West Coast Projects Office
2550 North Hollywood Way, 3rd Floor, Burbank, CA 91505-1055
Facsimile 818-847-0256 or 818-847-0170

SFUND RECORDS CTR
SDMS # 66779

SFUND RECORDS CTR
2462-00206

LOCKHEED MARTIN



Via Federal Express
CAY0599/218
WBS# 48720

May 21, 1999

Mr. Gerard J. Thibeault
Executive Officer
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, California 92501-3339

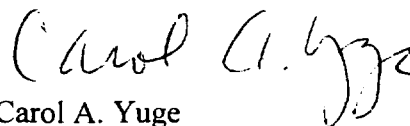
Dear Mr. Thibeault:

**Subject: April 1999 Data Report
Water Supply Contingency Plan
Production Well Sampling Program
Crafton-Redlands Plume Project**

In compliance with the approved Water Supply Contingency Plan, enclosed please find one copy of the **April 1999, Production Well Sampling Program** report prepared by HSI-Geotrans for the Lockheed Martin Corporation. This report presents analytical results from samples collected at Bunker Hill Basin Production Wells in April of 1999. Laboratory Quality Assurance/Quality Control documentation is in Attachment C which is also enclosed for your review.

Should you have any questions, comments, or requests, please contact Tom Blackman at (818) 847-0791 or John Hemmans at (818) 847-0191.

Sincerely,


Carol A. Yuge

Enclosures

cc: See Attached Distribution List

Gerard Thibeault
May 21, 1999
CAY0599/218
Page 2

Distribution:

cc: (Abbreviated Report Without Attachments "A, B, & C" Which are Available Upon Request)
Kim Alexander, Psomas
Kalyanpur Baliga, Department of Health Services (San Bernardino)
Tom Bartol, USAF, Norton Air Force Base
Henry Dennis, Mountainview Power Company
Dodie Farmer, Victoria Farms Mutual Water Company
Douglas Headrick, San Bernardino Valley Water Conservation District
Mike Huffstutler, City of Redlands
Ross Lewis, Gage Canal Company
Kevin Mayer, US EPA (Region IX)
Steve Mains, Western Municipal Water District
Morris Matson, Loma Linda University
Eugene McMeans, Riverside Highland Water Company
Zahra Panahi, City of Riverside
Dan Randall, City of Riverside
Bob Reiter, San Bernardino Valley Municipal Water District
Toby Roy, Department of Health Services (San Diego)
Alain Sharp, Earth Technology Corporation
Greg Snyder, City of Loma Linda
Joseph Stejskal, City of San Bernardino
Dieter Wirtzfeld, City of Riverside



HSI GEOTRANS

A TETRA TECH COMPANY

3150 Bristol Street
Suite 500
Costa Mesa, California
92626

714-513-1415 FAX 714-513-1278

May 20, 1999

Lockheed Martin Corporation
West Coast Project Office
2550 N. Hollywood Way, 3rd Floor
Burbank, California 91505

Attention: Mr. John Hemmans
Project Coordinator

Subject: April 1999 Data Report
Water Supply Contingency Plan
Production Well Sampling Program
Crafton-Redlands Plume Project

Dear Mr. Hemmans:

This report presents a summary of field procedures, protocols, and results of the Water Supply Contingency Plan production well sampling for the month of April 1999. The Water Supply Contingency Plan (WSCP) was prepared by Lockheed Martin Corporation and submitted to the State of California Regional Water Quality Control Board (RWQCB) Santa Ana Region on September 30, 1996. The plan was conditionally approved by the RWQCB in a letter dated March 6, 1997. The WSCP for the Crafton-Redlands Plume was prepared to address maintenance of water supply to purveyors in the event that wells became impacted with trichloroethene (TCE) from the Crafton-Redlands TCE Plume. A summary of key dates and WSCP sampling program evolution is provided on Table 1.

The locations of the WSCP wells and analytical results for the April 1999 sampling event for TCE and perchlorate are shown on Figures 1 and 2, respectively. Table 2 presents a summary of analytical tests performed on each WSCP well and water system sampling point. The sampling frequency of each well is once a month for the first year. More frequent sampling, if required, is based on the analytical results as outlined in the WSCP TCE and perchlorate decision matrices, provided as Figures 3 and 4, respectively. The perchlorate decision matrix was presented in the *Perchlorate Work Plan and Schedule*, which was submitted, to the RWQCB on August 15, 1997. The RWQCB approved the Perchlorate Work Plan on October

31, 1997. Table 3 presents a summary of the wells sampled twice monthly according to the decision matrices.

RESULTS

A summary of the analytical results for the April 1999 WSCP sampling event for TCE and perchlorate is shown on Figures 1 and 2, respectively, and presented on Table 4. Available groundwater elevation data is provided on Table 5. Chain-of-custody and laboratory data sheets are in Attachment B and Level III QA/QC documentation is in Attachment C. Attachments A, B, and C are available upon request.

Trichloroethene

In April 1999, TCE was detected at or above the detection limit of 0.5 µg/L in five wells and two water system sampling points including; Gage 26-1 (12 µg/L), Gage 27-1 (9.9 µg/L), Gage 27-2 (0.53 µg/L), Gage 29-2 (3.4 µg/L), Gage 92-1 (0.78 µg/L), Mountain View Blend at Timoteo (1.2 µg/L), and Gage Delivery (0.79 µg/L). as shown on Figure 1 and Table 4. Groundwater samples collected from the remaining WSCP wells and system sampling points did not detect TCE.

Three groundwater samples collected in April met or exceeded 2/5th the MCL for TCE (2.0 µg/L) including; Gage 26-1 (12 µg/L), Gage 27-1 (9.9 µg/L), and Gage 29-2 (3.4 µg/L). The TCE impacts at Gage 26-1 and Gage 27-1 are attributed to the Norton AFB plume, thus, more frequent TCE sampling will not be implemented. The TCE impacts at Gage 29-2 are wholly or partially attributed to the Norton AFB plume, thus, more frequent sampling will not be implemented.

Perchlorate

In April 1999, perchlorate was detected at or above the detection limit of 4 µg/L in two COLL wells (Mountain View #2 and Richardson #1), nine City of Riverside Gage wells (Gage 26-1, Gage 27-1, Gage 27-2, Gage 29-1, Gage 29-2, Gage 46-1, Gage 51-1, Gage 66-1, and Gage 92-1), two Loma Linda University wells (Anderson #2 and Anderson #3), two City of Riverside system sampling points (Gage Delivery and 7th & Chicago), and two City of Loma Linda system sampling points (Mountain View Blend–Lawton and Mountain View Blend–Timoteo), as presented on Figure 2 and Table 4.

In the April WSCP sampling, perchlorate was detected at or above 75 percent (13.5 µg/L) of the PAL in one City of Riverside well (Gage 29-2) and one City of Loma Linda system sampling point (Mountain View Blend–Timoteo). Gage 29-2 is currently being sampled on a twice a month basis. The April 1, 1999 sample result from the COLL Mountain View Blend – Timoteo exceeded 75 percent of the

perchlorate PAL. On April 23, 1999 a perchlorate confirmation sample was collected from the COLL Mountain View Blend – Timoteo system. The perchlorate confirmation sample result for Mountain View Blend – Timoteo was 7.0 µg/L. The April 1, 1999 perchlorate result was not confirmed, thus more frequent sampling of this system sampling point will not be implemented.

The sampling point designated as “Mountain View Blend – Timoteo” is a “blow-off” valve which discharges water from the Mountain View main pipeline into the San Timoteo Creek. This sampling point is designated as “Mountain View Blend – Timoteo” because when Mountain View #1 and Mountain View #2 were both pumping to the distribution system, it provided a blended water sample from these two wells. Since Mountain View #1 is no longer operational, this sampling point provides data on Mountain View #2 only. Mountain View #2 samples are being collected at the wellhead as required by the Blending Plan approved by the California Department of Health Services on October 23, 1998. Therefore, beginning in May 1999, Lockheed Martin will cease sampling Mountain View Blend – Timoteo until such time that this location provides a blend sample result from more than one water source.


Perchlorate concentrations from the Mountain View Blend – Timoteo sampling point are not indicative of water being served for distribution. The water from Mountain View #2 passing this sampling point is joined in the Mountain View main pipeline with water imported from Pressure Zone 1 via the Mountain View – Lawton Boosters. Blending of these two waters occurs from their confluence to the 3.2 million-gallon reservoir. The analytical results obtained from the sampling point described as Mountain View Blend – Lawton (5.3 µg/L in the April 1999 sampling event) is indicative of this blended water which is served for distribution.

CLOSING

HSI GeoTrans greatly appreciates being of continued service to Lockheed Martin Corporation on this project. Should you have any questions or comments, please do not hesitate to call.

Sincerely,

HSI GEOTRANS



Roy J. Marroquin

Project Manager



James C. Norman, R.G., C.HG.

Project Director

TABLES

TABLE 1

KEY PROJECT DATES AND WSCP SAMPLING PROGRAM EVOLUTION

| |
|---|
| September 30, 1996, Lockheed Martin submitted the Water Supply Contingency Plan (WSCP) to the RWQCB – Santa Ana Region. |
| March 6, 1997, the RWQCB conditionally approved the WSCP, which included sampling eight production wells (City of Loma Linda Richardson #1, Richardson #2, Mountain View #1, Mountain View #2, Victoria Farms Mutual Water Company Wells #1 and #3, and Southern California Edison #1 and #2). |
| June 1997, Victoria Farms Mutual Water Company was connected to City of San Bernardino Water. Pumping ceased at VFMWC #1 and #3, and the two wells were removed from the program. |
| June 1997, sampling of SCE #1 was discontinued due to sampling logistics. The WSCP consists of five wells, including COLL Mountain View #1 and #2, COLL Richardson #1 and #2, and SCE #2 (AUX). |
| August 1997, the WSCP was expanded due to the detection of perchlorate in municipal supply wells in the Bunker Hill Basin. Twenty-six wells were added to the WSCP including nineteen City of Riverside wells, five City of Redlands wells, and two Loma Linda University wells, for a total of 31 wells. |
| October 1997, three City of Riverside water system sampling points were added to the WSCP, including the Gage system pipeline (Gage Delivery), the Waterman system pipeline (Iowa Booster), and the sampling station measuring outflow from the Linden and Evans Reservoirs (7 th & Chicago). |
| March 1998, two City of Loma Linda water system sampling points were added to the WSCP, including the Mountain View system pipeline (Mountain View Blend at Lawton) and the Richardson system pipeline (Richardson Blend). |
| June 1998, one City of Riverside irrigation water system sampling point (Gage Arlington) and one additional City of Loma Linda water system sampling point (Mountain View Blend at Timoteo) were added to the WSCP. |
| December 1998, COLL Richardson #3 Well Added to WSCP Sampling Program. |

TABLE 2

WSCP PRODUCTION WELL SAMPLING PROGRAM

| HSI# | Well Name | Perchlorate | TCE |
|--|------------------------------|-------------|-----|
| City of Loma Linda | | | |
| 691 | Mountain View #1 | X | X |
| 692 | Mountain View #2 | X | X |
| 693 | Richardson #1 | X | X |
| 694 | Richardson #2 | X | X |
| 707 | Richardson #3 | X | X |
| City of Loma Linda Water System Sampling Points | | | |
| 2967 | Mountain View Blend - Lawton | X | X |
| 3016 | Mountain View - Timoteo | X | X |
| 2968 | Richardson Blend | X | X |
| Southern California Edison | | | |
| 554 | SCE#2(AUX) | X | X |
| Loma Linda University | | | |
| 267 | LLUniv Anderson #2 | X | |
| 717 | LLUniv Anderson #3 | X | |
| City of Riverside (Gage System) | | | |
| 252 | Gage#26-1 | X | X |
| 258 | Gage#27-1 | X | X |
| 259 | Gage#27-2 | X | X |
| 260 | Gage#29-1 | X | X |
| 219 | Gage#29-2 | X | X |
| 220 | Gage#29-3 | X | X |
| 218 | Gage#30-1 | X | X |
| 214 | Gage#31-1 | X | X |
| 215 | Gage#46-1 | X | X |
| 253 | Gage#51-1 | X | X |
| 216 | Gage#56-1 | X | X |
| 257 | Gage#66-1 | X | X |
| 644 | Gage#92-1 | X | X |
| 641 | Gage#92-2 | X | X |
| 642 | Gage#92-3 | X | X |
| 645 | Gage 6New | X | X |
| City of Riverside (Waterman System) | | | |
| 273 | Hunt#6 | X | |
| 271 | Hunt#10 | X | |
| 272 | Hunt#11 | X | |
| City of Riverside Water System Sampling Points | | | |
| 2946 | Iowa Booster (Waterman) | X | X |
| 2947 | Gage Delivery (Gage) | X | X |
| 2948 | 7th & Chicago (Reservoir) | X | X |
| 3018 | Gage Arlington | X | X |
| City of Redlands | | | |
| 542 | COR Church St | X | |
| 2673 | COR#38 | X | |
| 535 | COR Mentone Acres | X | |
| 29 | COR Orange st | X | |
| 74 | CORRees | X | X |

Notes:

TCE = Trichloroethene

Perchlorate analyzed using DHS Method (EPA 300.0 Modified)

TCE analyzed using EPA Method 502.2

TABLE 3

**WSCP PRODUCTION WELL SAMPLING PROGRAM
MARCH 1999 WELLS SAMPLED TWICE MONTHLY**

| HSI# | Well Name | Perchlorate | TCE |
|--|------------------|-------------|-----|
| City of Loma Linda | | | |
| 692 | Mountain View #2 | X | |
| City of Riverside (Gage System) | | | |
| 219 | Gage #29-2 | X | |
| 220 | Gage #29-3 | X | |

Notes:

TCE = Trichloroethene

Perchlorate analyzed using DHS Method (EPA 300.0 Modified).

TCE analyzed using EPA Method 502.2.

In April Gage 29-3 was not sampled because the well was off-line.

TABLE 4
WSCP PRODUCTION WELL SAMPLING PROGRAM
APRIL 1999 DATA RESULTS

| HS# | Well Name | Sample Date | Perchlorate (ppb) Del Mar | TCE (ppb) Del Mar |
|--|--------------------------------|-------------|------------------------------|----------------------|
| City of Loma Linda | | | | |
| 692 | Mountain View #2 | 4/1/99 | 7.3 | ND(0.5) |
| 692 | MUN-736 | 4/1/99 | 7.3 | ND(0.5) |
| 692 | Mountain View #2* | 4/21/99 | 7.1 | NA |
| 693 | Richardson #1 | 4/1/99 | 9.6 | ND(0.5) |
| 694 | Richardson #2 | NS | NS | NS |
| 707 | Richardson #3 | 4/1/99 | ND(4) | ND(0.5) |
| City of Loma Linda Water System Sampling Points | | | | |
| 2967 | Mountain View Blend-Lawton | 4/1/99 | 5.3 | ND(0.5) |
| 3016 | Mountain View Blend-Timoteo | 4/1/99 | 23 | 1.2 |
| 3016 | Mountain View Blend-Timoteo | 4/23/99 | 7.0 | NA |
| 2968 | Richardson Blend | 4/1/99 | ND(4) | ND(0.5) |
| Southern California Edison | | | | |
| 554 | SCE#2(AUX) | 4/1/99 | ND(4) | ND(0.5) |
| Loma Linda University | | | | |
| 267 | LLUniv Anderson #2 | 4/1/99 | 6.7 | NA |
| 717 | LLUniv Anderson #3 | 4/1/99 | 5.6 | NA |
| City of Riverside (Gage System) | | | | |
| 252 | Gage#26-1 | 4/6/99 | 7.0 | 12 |
| 258 | Gage#27-1 | 4/2/99 | 6.6 | 9.9 |
| 259 | Gage#27-2 | 4/2/99 | 8.2 | 0.53 |
| 260 | Gage#29-1 | 4/2/99 | 9.1 | ND(0.5) |
| 219 | Gage#29-2 | 4/5/99 | 23 | 3.4 |
| 219 | Gage 29-2* | 4/16/99 | 23 | NA |
| 220 | Gage#29-3 | NS | NS | NS |
| 220 | Gage#29-3* | NS | NS | NS |
| 218 | Gage#30-1 | 4/2/99 | ND(4) | ND(0.5) |
| 214 | Gage#31-1 | NS | NS | NS |
| 215 | Gage#46-1 | 4/2/99 | 6.4 | ND(0.5) |
| 253 | Gage#51-1 | 4/2/99 | 12 | ND(0.5) |
| 216 | Gage#56-1 | 4/2/99 | ND(4) | ND(0.5) |
| 257 | Gage#66-1 | 4/2/99 | 11 | ND(0.5) |
| 644 | Gage#92-1 | 4/2/99 | 12 | 0.78 |
| 644 | MUN-737 | 4/2/99 | 12 | 0.78 |
| 641 | Gage#92-2 | 4/2/99 | ND(4) | ND(0.5) |
| 642 | Gage#92-3 | 4/2/99 | ND(4) | ND(0.5) |
| City of Riverside (Waterman System) | | | | |
| 273 | Hunt#6 | NS | NS | NA |
| 271 | Hunt#10 | NS | NS | NA |
| 272 | Hunt#11 | NS | NS | NA |
| City of Riverside Water System Sampling Points | | | | |
| 2946 | Iowa Booster (Waterman) | 4/5/99 | ND(4) | ND(0.5) |
| 2947 | Gage Delivery (Gage) | 4/5/99 | 5.2 | 0.79 |
| 2948 | 7th & Chicago (Reservoir) | 4/5/99 | 4.2 | ND(0.5) |
| 2948 | MUN-738 | 4/5/99 | 4.1 | ND(0.5) |
| 3018 | Gage Arlington | 4/5/99 | ND(40) ^b | NA |
| City of Redlands | | | | |
| 542 | COR Church St ^a | NS | NS | NA |
| 2673 | COR#38 ^a | 4/1/99 | ND(4) | NA |
| 535 | COR Mentone Acres ^a | NS | NS | NA |
| 29 | COR Orange St ^a | NS | NS | NA |
| 74 | COR Rees | NS | NS | NS |

Notes:

- * = Twice-monthly sampling result
- * = Well sampled on quarterly basis, if active
- ° = Sample diluted ten-fold to reduce matrix interference
- ND(4) = Not detected at the specified limit
- MUN = Duplicate sample collected from the well listed directly above
- NS = Not sampled
- NA = Not analyzed

TCE = Trichloroethene
 DEL MAR = Del Mar Analytical Laboratory of Irvine, CA
 Perchlorate analyzed using DHS Method (EPA 300.0 Modified)
 TCE analyzed using EPA Method 502.2

TABLE 5

**SUMMARY OF WATER LEVEL MEASUREMENTS
APRIL 1999 SAMPLING EVENT**

| HSI# | Well Name | Measure Date | Depth to Water | Measuring Point Elevation | Groundwater Elevation | Comments |
|--|--------------------|--------------|----------------|---------------------------|-----------------------|----------|
| CITY OF LOMA LINDA | | | | | | |
| 692 | Mountain View #2 | 03/29/99 | 143 | 1085 | 942 | Static |
| 693 | Richardson #1 | 03/29/99 | 132 | 1077 | 945 | Static |
| 694 | Richardson #2 | 03/29/99 | NM | 1078 | NM | NM |
| 707 | Richardson #3 | 03/29/99 | 135 | NA | NA | Static |
| Southern California Edison | | | | | | |
| 554 | SCE#2(AUX) | NM | NM | 1100.00 | NM | Pumping |
| Loma Linda University | | | | | | |
| 267 | LLUniv Anderson #2 | NM | NM | 1075 | NM | Pumping |
| 717 | LLUniv Anderson #3 | NM | NM | 1070 | NM | Pumping |
| City of Riverside (Gage System) | | | | | | |
| 252 | Gage#26-1 | 03/30/99 | 59.70 | 1045.33 | 985.63 | Static |
| 258 | Gage#27-1 | 03/30/99 | 69.0 | 1044.64 | 975.64 | Pumping |
| 259 | Gage#27-2 | 03/30/99 | 60.8 | 1044.64 | 983.84 | Static |
| 260 | Gage#29-1 | 03/30/99 | 62.5 | 1044.43 | 981.93 | Static |
| 219 | Gage#29-2 | 03/30/99 | 68.0 | 1046.31 | 978.31 | Pumping |
| 220 | Gage#29-3 | 03/30/99 | 58.20 | 1048.75 | 990.55 | Static |
| 218 | Gage#30-1 | 03/30/99 | 148.9 | 1054.17 | 905.27 | Pumping |
| 214 | Gage#31-1 | 03/30/99 | 62.9 | 1054.64 | 991.74 | Static |
| 215 | Gage#46-1 | 03/30/99 | 121.6 | 1065.50 | 943.90 | Pumping |
| 253 | Gage#51-1 | 03/30/99 | 143.9 | 1044.64 | 900.74 | Pumping |
| 216 | Gage#56-1 | 03/30/99 | 149.0 | 1065.50 | 916.50 | Pumping |
| 257 | Gage#66-1 | 03/30/99 | 108.8 | 1044.85 | 936.05 | Pumping |
| 644 | Gage#92-1 | 03/30/99 | 138.8 | 1047.78 | 908.98 | Pumping |
| 641 | Gage#92-2 | 03/30/99 | 167.3 | 1053.38 | 886.08 | Pumping |
| 642 | Gage#92-3 | 03/30/99 | 160.9 | 1058.78 | 897.88 | Pumping |
| City of Riverside (Waterman System) | | | | | | |
| 273 | Hunt#6 | NM | NM | 1015.5 | NM | Pumping |
| 271 | Hunt#10 | NM | NM | 1017 | NM | Pumping |
| 272 | Hunt#11 | NM | NM | 1015.7 | NM | Pumping |
| City of Redlands | | | | | | |
| 542 | COR Church St | Apr-99 | 89.0 | 1344.8 | 1255.8 | Static |
| 2673 | COR#38 | Apr-99 | 84.0 | NA | NA | Static |
| 535 | COR Mentone Acres | Apr-99 | 142.0 | 1506.4 | 1364.4 | Static |
| 29 | COR Orange St | Apr-99 | 140.0 | 1282 | 1142.0 | Static |
| 74 | COR Rees | Apr-99 | 181.0 | 1490 | 1309.0 | Static |

Notes:

All measurements reported in feet below measuring point (ft-bmp)

Water level measurements for all City of Loma Linda, City of Riverside, and City of Redlands wells were obtained by purveyor personnel.

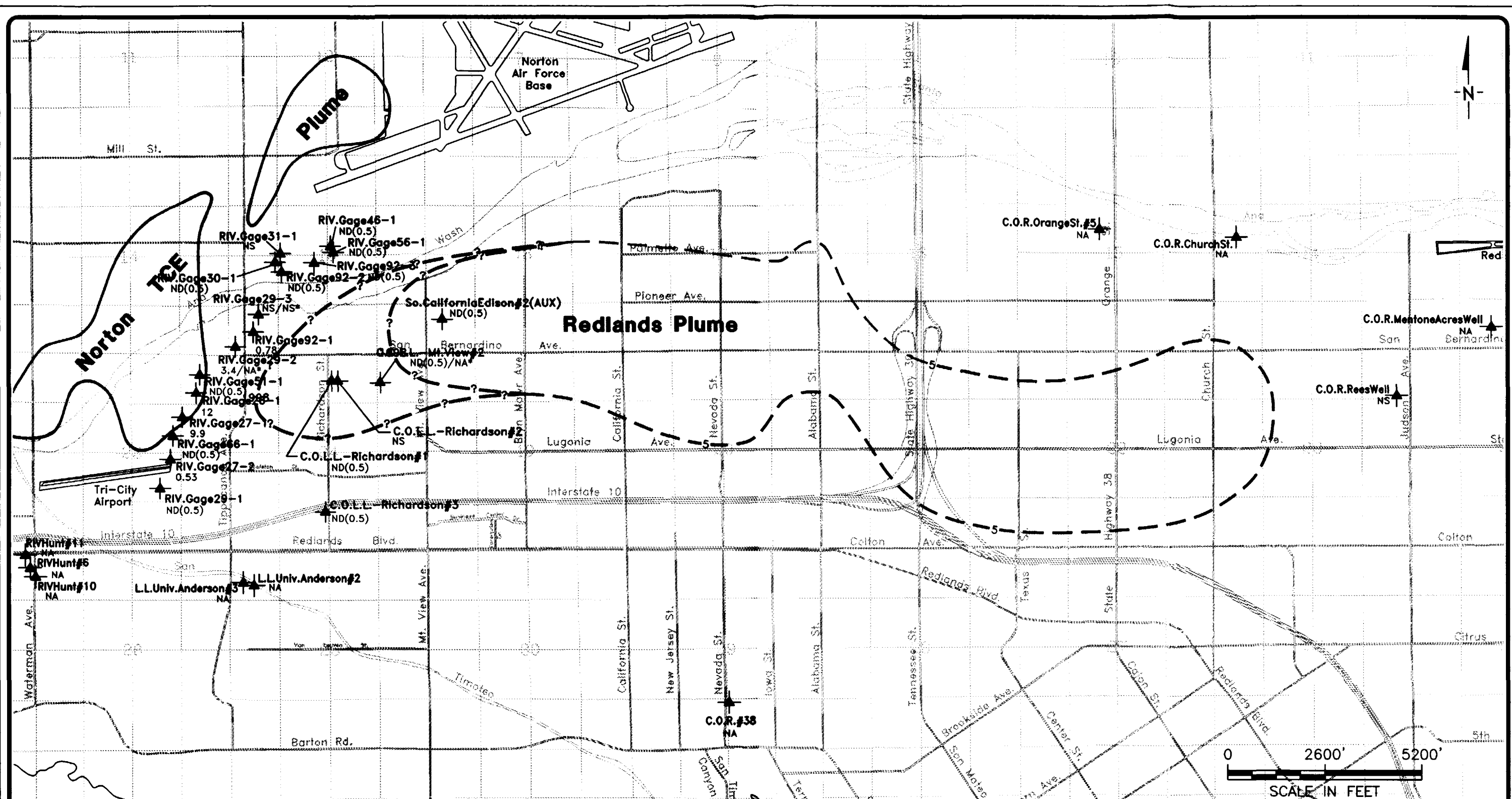
Elevations given in feet above mean sea level (ft-msl)



NM=Not measured

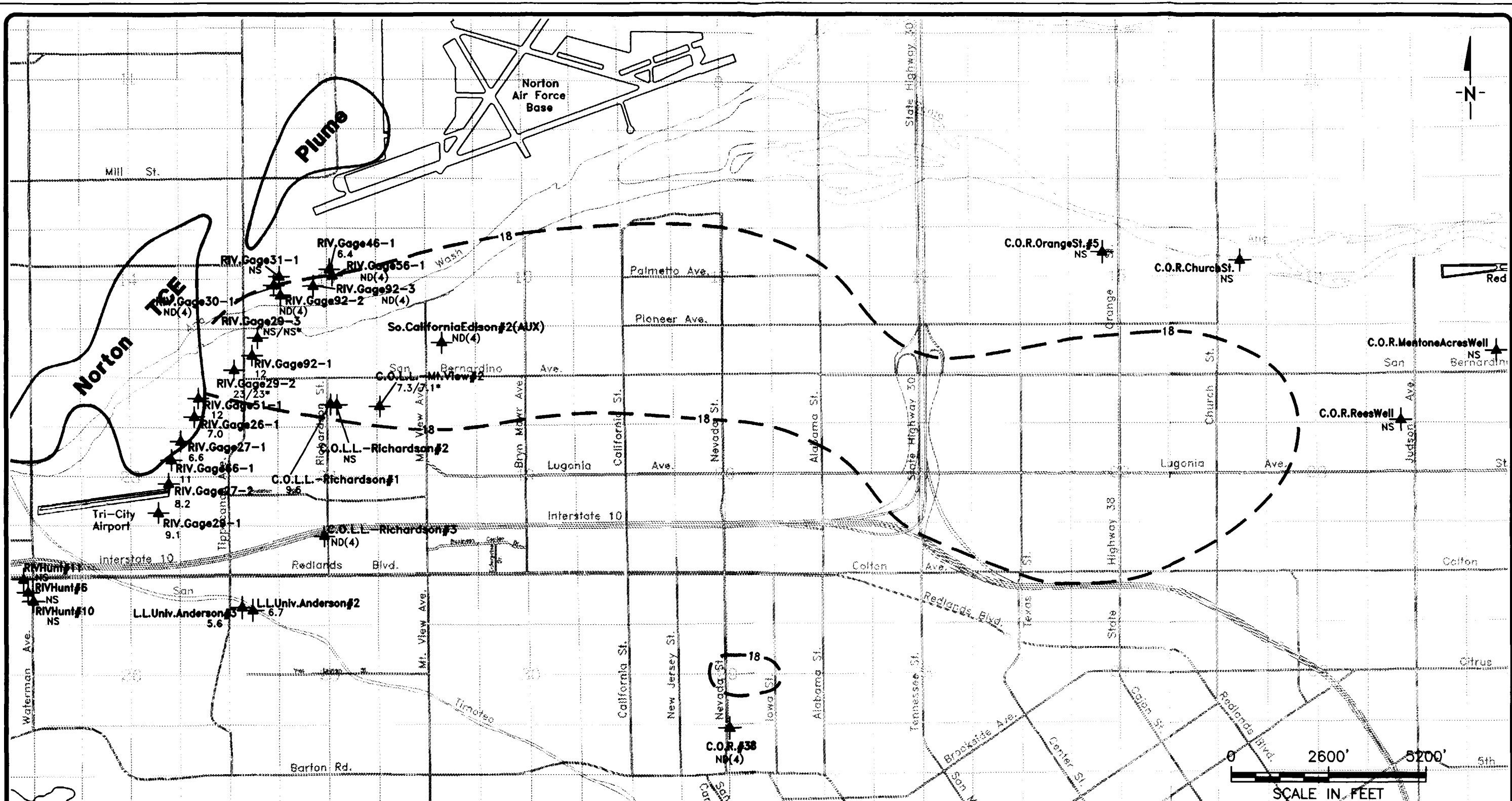
NA=Data not available

Static water levels were allowed to recover a minimum of 30 minutes to obtain a static water level measurement


FIGURES



| | | | | | | | | | | | | |
|--|--|--|--|---------|---|---------|---|---|--|--|------------------------|---------|
| EXPLANATION | | -- 5 -- Approximate TCE Plume Location 5 µg/L (1998 Interpretation of Redlands Plume) | | ND(0.5) | Not Detected at Indicated Detection Limit | ND(0.5) | C.O.L.L. Mountain View Blend at Lawton | TITLE: WSCP Production Well Sampling Program TCE Data Results April 1999 | | | | |
|  Wells Currently Sampled Under the Existing WSCP Sampling Program | | -- 5 -- Approximate TCE Plume Location 5 µg/L (1998 Interpretation of Norton AFB Plume, by Norton) | | NS | Not Sampled | 1.2 | C.O.L.L. Mountain View Blend at Timoteo | LOCATION: LOCKHEED MARTIN REDLANDS, CALIFORNIA | | | | |
| 12 TCE Results (µg/L) | | -- 1998 -- Project 5 µg/L TCE Contour in Hydrostratigraphic Unit 2 | | NA | Not Analyzed | ND(0.5) | C.O.L.L. Richardson Blend |  HSI GEOTRANS A TETRA TECH COMPANY | | | | |
| | | -- 1998 -- Project 5 µg/L TCE Contour in Hydrostratigraphic Unit 4 | | * | Twice-Monthly Sampling Results | ND(0.5) | Riv. Iowa Booster (Waterman) | | | | CHECKED: Roy Marroquin | FIGURE: |
| | | | | | | 0.79 | Riv. Gage Delivery (Gage) | | | | DRAFTED: Hector Magaña | 1 |
| | | | | | | ND(0.5) | Riv. 7th + Chicago (Reservoir) | PROJ.: C541-101 | | | | |
| | | | | | | NA | Gage Arlington | DATE: 05/06/99 | | | | |
| M:\redlands\view-graphs\71\68-b.dwg | | | | | | | | | | | | |



EXPLANATION

-  Wells Currently Sampled Under the Existing WSCP Sampling Program
 -18- Approximate 18 µg/L Perchlorate Plume Location (1998 Interpretation)
 -5- Approximate TCE Plume Location 5 µg/L (1998 Interpretation of Norton AFB Plume, by Norton)

M:\redlands\view-graphs\71w155-b.dwg

9.2 Perchlorate ($\mu\text{g/L}$) Results

- ND(4) Not Detected at Indicated Detection Limit
- NS Not Sampled
- * Twice-Monthly Sampling Results
- a Confirmation Sampling Results
- b Sample Diluted Ten-Fold to Reduce Matrix Interference

23/7.0° C.O.L.L. Mountain View Blend - Timoteo

- 5.3 C.O.L.L. Mountain View Blend - Lawton
ND(4) C.O.L.L. Richardson Blend
ND(4) Riv. Iowa Booster (Waterman)
5.2 Riv. Gage Delivery (Gage)
4.2 Riv. 7th + Chicago (Reservoir)
ND(40)^b Gage Arlington

TITLE: WSCP Production Well Sampling Program
Perchlorate Data Results April 1999

LOCATION:

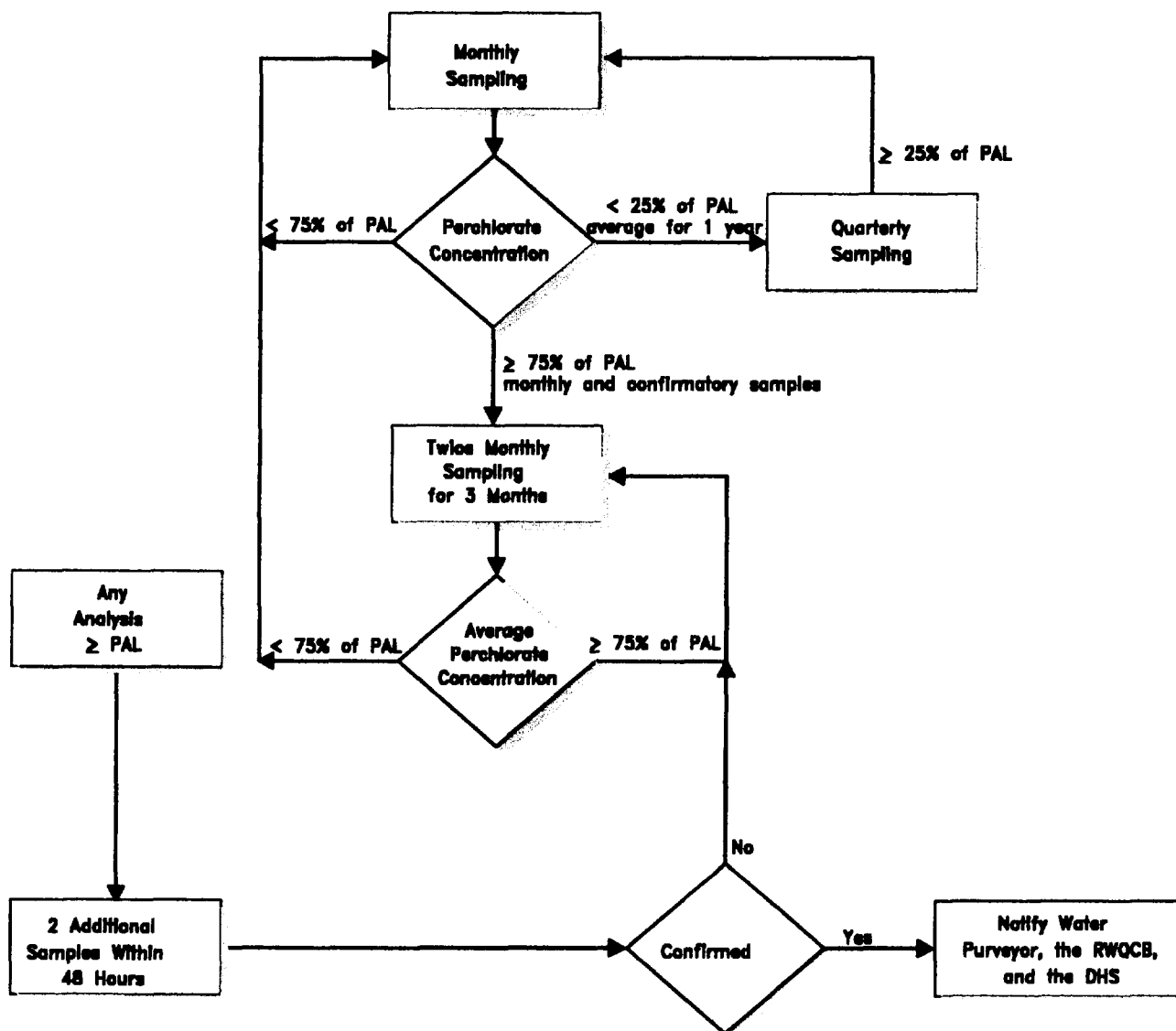
LOCKHEED MARTIN
REDLANDS, CALIFORNIA



| | | |
|-----------------------|-----------------|---------------|
| S NY | CHECKED: | Roy Marroquin |
| | DRAFTED: | Hector Magaña |
| | PROJ.: | C541-101 |
| | DATE: | 05/06/99 |


FIGURE:

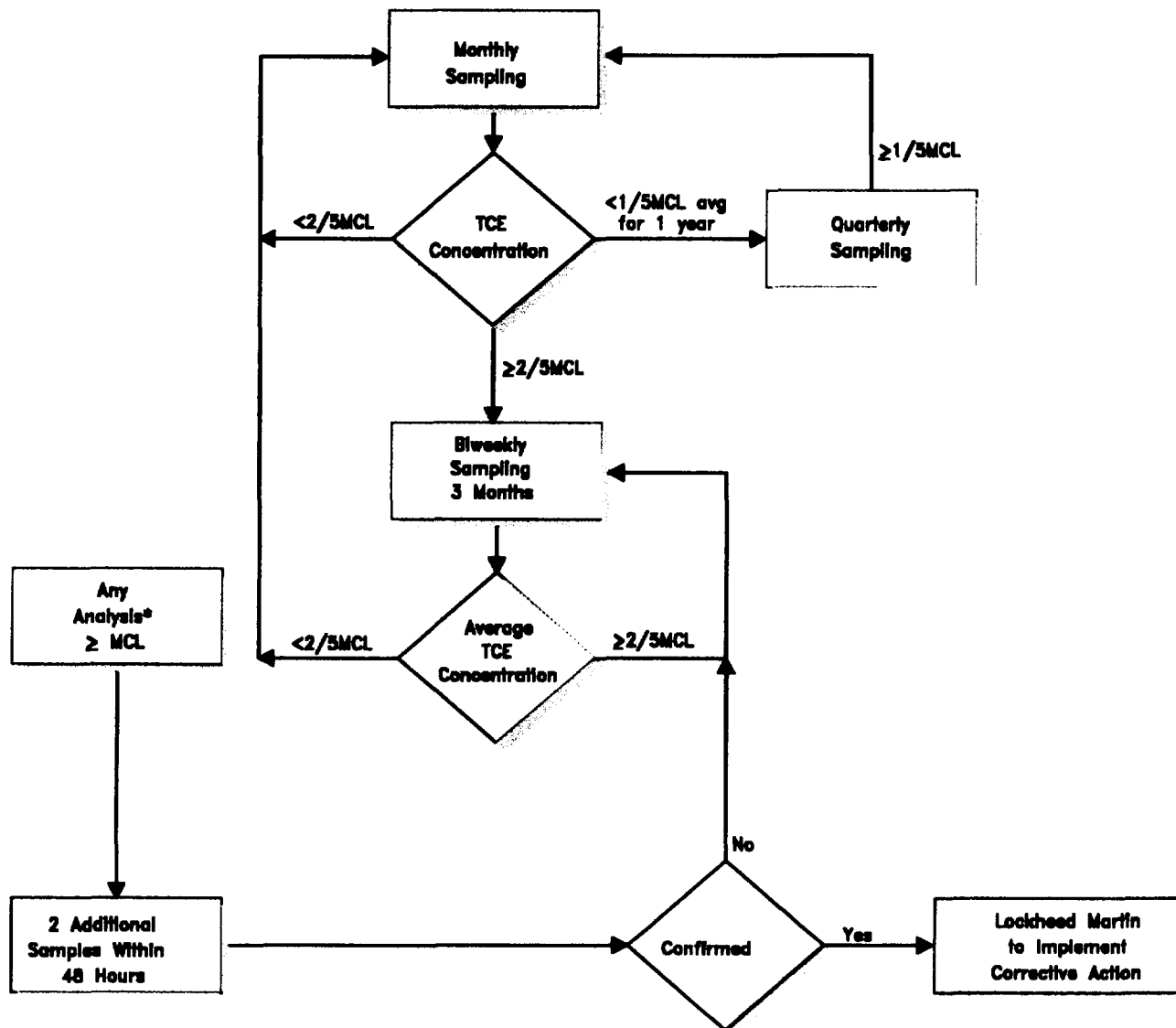
2



Footnote:

Perchlorate Provisional Action Level (PAL) = 18 µg/L (California Department of Health Services, May 1997)

| | | | |
|---|----------|--|-------------------------|
| TITLE: | | Decision Matrix for Sampling Production Wells for Perchlorate | |
| LOCATION: | | LOCKHEED MARTIN REDLANDS, CALIFORNIA | |
|  HSI GEOTRANS A TETRA TECH COMPANY | CHECKED: | Ron Bruns | FIGURE: 3 |
| | DRAFTED: | Hector Magaña | |
| | PROJ.: | C541-101 | |
| | DATE: | 09/25/98 | |



Footnote:

* If, at a specific well, blending is occurring to provide acceptable water for compounds other than TCE, then no corrective action may be necessary as long as the concentration of TCE is less than 5.0 µg/L in the finished water.

TCE MCL = 5 µg/L (California Regulations, Title 22, Division 4, Chapter 15, Section 64444)

TITLE: Decision Matrix for Sampling of Production Wells for TCE from the Crafton-Redlands Plume

LOCATION: LOCKHEED MARTIN
REDLANDS, CALIFORNIA



**HSI
GEOTRANS**
A TETRA TECH COMPANY

| | |
|----------|---------------|
| CHECKED: | Ron Bruns |
| DRAFTED: | Hector Magaña |
| PROJ.: | C541-101 |
| DATE: | 09/25/98 |

FIGURE:

4

ATTACHMENT A
GEOLIS FIELD FORMS

ATTACHMENT A

GEOLIS FIELD FORMS
(Available Upon Request)

ATTACHMENT B

**CHAIN-OF-CUSTODY RECORDS AND
LABORATORY DATA SHEETS**

ATTACHMENT B

**CHAIN-OF-CUSTODY RECORDS AND
LABORATORY DATA SHEETS**
(Available Upon Request)

ATTACHMENT C

LEVEL III

QUALITY ASSURANCE/QUALITY CONTROL DOCUMENTATION

ATTACHMENT C

LEVEL III

QUALITY ASSURANCE/QUALITY CONTROL DOCUMENTATION

(Available Upon Request)